



**DEPARTMENT OF ARCHITECTURE
UNIVERSITY OF THE PUNJAB, LAHORE.**

**BACHELORS OF ARCHITECTURE (B. ARCH)
5 YEARS PROGRAM**

COURSE OUTLINE

Course Title	Structural System II
Course Code	ARCH-262
Credit Hours	2
Semester	Spring
Prerequisites	NA
Tutor	As per Timetable
Student Advising	As per Timetable
Contact	-

Teacher Signature

Chairman Signature

Course introduction

The course will introduce the students to the basic concept of structure, masonry, load bearing capacity frame structure, wooden frame structure and structure materials.

Learning Objective:

To introduce students in design of buiding structures; major construction materials; analysis, preliminary design and behavior of beams, columns, slabs, frames, and stability of structural frames.

Outcome

At the end of this course students will get a basic understanding of the following

1. Soil
2. Concret structure, form work & Poureing of concret
3. Temporary structures

Learning Methodology:

- Lectures as provided in the schedule of the semester activities
- Study of Archival Material and recommended books
- Guest Lectures as per requirement
- Presentation on allocated topics

Grade Evaluation Criteria

Following, is the criteria for the distribution of marks to evaluate final grade in a semester.

Marks Evaluation	Marks in percentage
Sessional (Assignments, Quizzes, Presentations)	30
Mid Term	30
Final examination	40
Total	100

Content	
Unit 1	Introduction to the Course

	Type of Soil
Unit 2	Comparison of R.C.C and masonry structures
Unit 3	Slab system (Long Span and Short Span Structures)
Unit 4	Pre-Cast Concrete Structures
Unit 5	Site Visit
Unit 6	Shuttering and Form Work
Unit 7	Preparation of Concrete
Unit 8	Student Presentation
Unit 9	Mid Term Exam
Unit 10	Cast in situ and premix concrete
Unit 11	RCC Columns
Unit 12	Temporary Structures
Unit 13	
Unit 14	Student Presentation
Unit 15	Case Studies
Unit 16	
Unit 17	Final Presentation
Unit 18	Final Exam
Recommended Books/References	<p><u>Recommended Text Books</u></p> <ul style="list-style-type: none"> • Building Structures Illustrated by Francis D.K.Ching • Design of Concrete Structures by Arthur H.Nilson, David Darwin, Charles W.Dolan • Construction materials, methods and techniques by William P.

Spence and Eva Kultermann

- Structure and Architecture by Angus J. Macdonald
- Structural Detail in concrete by M.Y.H Bangash

Reference Books

The Structural basis of architecture by Bjorn N. Sandaker, Arne

P. Eggen & Mark R. Cruvellier

- Structure for architects and Engineers by Philip Garrison
- The Architect's Studio Companion by Edward Allen and Joseph Iano.